

Spectrofluorimetric determination of arsenic(III) using dansylated peptide

ABSTRACT

The potential of dansylated peptide in determination of arsenic(III) was investigated. Fluorescence intensity of dansyl-D-Ala-Gly-OH (DAG) was quenched during addition of arsenic(III) in aqueous solution. The fluorescence spectrum of DAG was measured at pH 12 with excitation and emission wavelengths of 331 nm and 524 nm. Limit of detection of arsenic(III) by DAG is 0.15 μM . The presence of foreign ions at 1:1 molar ratio of arsenic(III)-interfering ions did not have significant effect on determination of arsenic(III). The developed detection method was also applied on analysis of electroplating waste samples.

Keyword: Fluorescent chemosensor; Dipeptide; As(III); Quenching.